

205-001

MATERIAL SAFETY DATA SHEET  
Essentially Similar to U.S. Department of Labor Form OSHA  
Revised 09/21/14  
HMIS Health-1 Flammability-0 Reactivity-1

SECTION I- Product and Company Identification

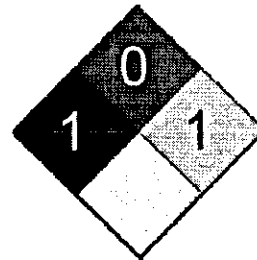
Manufacturer: A.V.W. Inc. d.b.a. Max Pro  
P.O. Box 9962  
Ft Lauderdale FL 33310  
Phone: 954-972-3338

24 Hour Emergency Phone Number: 800-424-9300  
Product Name: Fiamm Sports Marine Big Horn 8 oz.  
CAS# 811-97-2

20008  
65808

LEGEND HMIS/NFPA	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

Health	1	1
Flammability	0	
Physical Hazard	1	
Personal Protection	X	



SECTION 2- Hazardous Information

Emergency Overview: WARNING: Contents under pressure- Gas under pressure. Toxic if Inhaled. Container may explode if heated. Can decompose at high temperatures forming toxic gases.

Potential Health Effects: Routes of Exposure: Eyes, Skin contacts, Inhalation

- Skin** Contact with liquid can cause cold burns and frostbite. May cause skin irritation. May cause: Discomfort, itching, redness, or swelling.
- Eyes** Contact with liquid can cause cold burns and frostbite. May cause eye irritation. May cause: tearing, Redness, Discomfort.
- Inhalation** Misuse or intentional inhalation abuse may cause death without warning symptoms, due to cardiac effects. Other symptoms potentially related to misuse or inhalation heartbeat with strange sensation in the chest, heart thumping, apprehension, feeling of fainting, dizziness or weakness. Vapors are heavier than air and can cause suffocation by reducing oxygen available for breathing. Prolonged exposure to an oxygen-deficient atmosphere may be fatal.
- Ingestion** Product is a gas. Ingestion is not likely route of exposure.
- Target organs** Eyes, Skin, Respiratory system
- Chronic effects** Prolonged or repeated exposure can cause drying, defatting and dermatitis.
- Signs and symptoms** Symptoms may include edema, drying redness, defatting and cracking of skin.
- Carcinogenicity** None of the components present in this material at concentrations equal to or greater than the 0.1% are listed by IARC, NTP, or OSHA, as a carcinogen.

SECTION 3-Composition / Information on Ingredients

Ingredients:	CAS#	Percent Concentration
Ethane, 1,1,1,2 -tetrafluoro-	811-97-2	100%

#### SECTION 4-First Aid Measures

Skin:	Treat frostbite by immediately immersing affected areas in warm water until skin has warmed up and turned pink. Take off all contaminated clothing immediately. Obtain medical attention immediately.
Eye contact:	In case of contact, remove contact lenses if applicable and immediately flush eyes with plenty of water for at least 15 minutes. Consult a physician if necessary.
Inhalation:	Remove from exposure, lie down. Move to fresh air. Keep patient warm and rest. Artificial respiration and/or oxygen may be necessary. Consult a physician. If breathing has stopped trained personnel should administer CPR immediately.
Ingestion:	Is not considered a potential route of exposure.
General advice:	Never give anything by mouth to an unconscious person. When symptoms persist or in all cases of doubt seek medical advice. Do not puncture or incinerate container. Avoid contact with eyes and skin. Keep out of reach of children.
Notes to Physician:	Because of possible disturbances of cardiac rhythm, catecholamine drugs, such as epinephrine, that may be used in situations of emergency life support should be used with special caution. Treat symptomatically.

#### SECTION 5-Fire Fighting Measures

Flammable Properties	Not flammable by WHMIS/OSHA criteria. Containers may explode when heated.
Flash Point:	does not flash N/Ap-Gas
Ignition:	> 743 °
Extinguishing media:	
Suitable extinguishing media:	Small Fires: Carbon dioxide, dry chemicals Large fires: water Spray, Fog, Foam
Unsuitable extinguishing media:	Not available
Protection of firefighters:	
Specific hazards arising from the chemical:	Contents under pressure. Pressurized container may explode when exposed to high heat or flames. Cool container by flooding large quantities of water until fire is out.
Protective equipment for firefighters	Firefighters should wear full protective clothing including self-contained breathing apparatus. Cool containers / tanks with water spray. Water runoff should be contained and neutralized prior to release
Fire and Explosion Hazard	May decompose on contact with flames or extremely hot metal surfaces to produce toxic and corrosive product. Thermal decomposition products are toxic.
Hazardous Combustion Products.	May include Carbon Halides-oxides of carbon, Fluoride Gases

#### SECTION 6-Accidental Release Measures

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) section before proceeding with clean up. Use appropriate Safety equipment during clean-up.

Safeguards (Personnel)	Evacuate personnel to safe areas. Ventilate area, especially low or enclosed places where heavy vapors might collect. Do not walk through or touch spilled material. Unless wearing appropriate clothing. Large spill or leak unlikely with aerosol containers.
Methods of containment	Eliminate ignition sources. No smoking or lit sparks or flames.
Methods of clean up	Before cleaning up refer to hazard data above. Remove sources of ignition. Use non-flammable absorbent in clean up. Large spills unlikely with aerosol containers.
Accidental Release Measures:	Should not be released into the environment. Self-contained breathing apparatus (SCBA) is required if a large release occurs. Avoid open flames and high temperatures.

## SECTION 7-Handling and Storage

**Handling (Personnel)** Use sufficient ventilation to keep exposure below recommended limits. For personal protection See section 8. Avoid breathing mist of aerosols.  
Handle in accordance with good industrial hygiene and safety practice.

**Storage:** Keep out of reach of children. Do not store in temperatures above 49°C. (120.2°F)  
Keep away from heat, open flames or other sources of ignition.

## SECTION 8-Exposure Controls/Personal Protection

**Exposure limits  
Ingredients**

**Exposure Limits**

Ethane, 1,1,1,2 tetrafluoro

ACGIH-TLV  
Not established  
OSHA-PEL  
Not established

**Engineering Controls** Use only with good ventilation conditions or respiratory protection.

**Personal protective equipment**

**Hand protection:** Additional protection: Impervious gloves made of viton, butyl rubber, PVC, neoprene or nitrile.

**Eye protection:** Wear safety glasses with side shields. Additionally wear a face shield where the possibility exists for face contact due to splashing, spraying or airborne contact with this material.

**Respiratory protection** Where exposure guidelines are exceeded use an approved NIOSH respirator

**Protective measures:** Self-contained breathing apparatus (SCBA) is required if a large release occurs.

**General hygiene** Handle in accordance with good industrial hygiene and safety practices.

## SECTION 9-Physical and Chemical Properties

**Appearance** Clear  
**Form:** Liquefied gas  
**Color:** colorless  
**Odor:** slight, ether-like  
**Boiling point/** -26.5 °C (-15.70 °F)  
**Flash Point**  
**Odor threshold** Not available  
**% Wt Volatile** 100  
**Vapor Pressure:** 662 k Pa  
**Specific gravity:** 1.21 at 25 °C (77 °F)  
**Water solubility:** 1.5 g/l at 25 °C (77 °F) at 1,013 hPa  
**Vapor density:** 3.6 at 25°C (77°F) and 1013 hPa (Air = 1.0)  
**Evaporation rate:** not available  
**Pour point** not available  
**Molecular weight** 102.03  
**Octanol/Water coefficient** Not available  
**Solubility(h<sub>2</sub>o)** Slightly  
**Auto-ignition temperature** .750°C(.1382.00°F)  
**Percent Volatile** 100

## SECTION 10-Stability and Reactivity

**Stability:** Stable under recommended storage conditions.  
**Conditions to avoid:** The product is not flammable in air and under ambient conditions of temperature and pressure. Aerosol contains  
Are unstable at temperatures above 49°C (120.2°F)  
**Incompatibility:** Alkali metals Alkaline earth metals, powdered metals, powdered metal salts  
**Hazardous decomposition**

Products: Decomposition products are hazardous. This material can be decomposed by high temperatures (open flames, glowing metal surfaces, etc.) forming hydrofluoric acid and possibly carbonyl fluoride. These materials are toxic and irritating. Avoid contact with decomposition products.

Hazardous reactions: Polymerization will not occur.

### SECTION 11-Toxicological Information

Component analysis -LC50

Ingredients LC50(Inhal'n Mouse 4h)=>500,000ppm)

Ethane, 1,1,1,2-tetrafluoro-  
Inhalation: excessive intentional inhalation may cause respiratory tract irritation and central nervous system effects/ vapors cause dizziness or suffocation.

Carcinogenicity Non-hazardous by WHMIS/OSHA criteria  
Reproductive effects Non-hazardous by WHMIS/OSHA criteria  
Mutagenicity No adverse mutagenic effects are anticipated  
Teratogenicity No adverse teratogenetic effects are anticipated  
Synergistic materials None known

### SECTION 12-Ecological Information

This material is practically non-toxic to Daphnia magna (48-hr EC EC50 930 mg/l) rainbow trout(96-hr-LC50 450 mg/l and bacterial(16-hr 10.730MG/L)

Ecotoxicity Not available  
Environmental Effects Not available  
Aquatic toxicity Not available  
Persistence/degradability Not available  
Bioaccumulation Not available  
Mobility in environment Not available  
Chemical fate info Not available  
Other adverse effects Not available

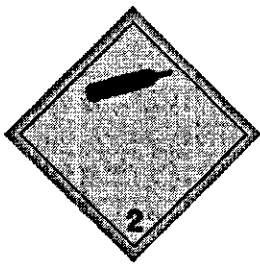
### SECTION 13-Disposal Considerations

Dispose of in accordance with local, provincial and federal regulations  
Waste codes Not available  
Disposal instructions Review federal state/provincial and local governments requirements prior to disposal  
Waste from disposed  
Unused product unavailable  
Contaminated Packaging unavailable

### SECTION 14-Transport Information

U.S. Department of Transportation (DOT)  
Basic Shipping requirements  
Proper Shipping name: Refrigerant gas R 134a mixture  
Hazard Class 2.2  
UN number 3159  
Additional Information  
Packaging exceptions ORM-D (applicable to containers up to 1L)  
NON-FLAMMABLE GAS

Transportation of Dangerous Goods TDG- Canada  
Basic Shipping requirements  
Proper Shipping Name Refrigerant Gas R-134a  
Hazard Class 2.2  
UN Number 3159  
Additional Information  
Packaging exceptions Limited quantity (container up tp 125mL)



ICAO/IATA (air):

Basic Shipping requirements

Proper shipping name Refrigerant gas R 134a  
Hazard class 2.2  
UN number 3159  
Additional Information  
Maximum net quantity 75kg  
Packaging

**SECTION 15-Regulatory Information**

US Federal Regulations This product is a "Hazardous Chemical" as defined by the OSHA hazard communication Standard 29 CFR 1910.1200 Classification:

All components are on the U.S. EPA TSCA Inventory List

CERCLA/SARA Hazardous Substances -Not applicable

Canadian Regulations This product has been classified in accordance with the hazard criteria of the Controlled products regulations and MSDS contains all the information required by the Controlled Products Regulations.

Occupational Safety and Health Administration (OSHA)  
29 CFR 1910.1200 Hazardous Chemical : Yes

Superfund Amendments and Reauthorization Act of 1986(SARA)

Hazard categories Immediate Hazard -yes  
Delayed hazard-no  
Fire Hazard-no  
Pressure hazard-yes  
Reactivity Hazard No

Section 302 extremely hazardous

Substance No

Section 311 hazardous

Chemical Yes  
Clean Air Act Not available  
Clean Water Act Not available  
WHMIS status Controlled  
WHMIS classification Class A compressed Gas

U.S. Minnesota -Hazardous Substance list

Ethane 1,1,1,2 tetrafluoro 811-97-2 present

US New Jersey Right to know Hazardous Substance List

Ethane 1,1,1,2 tetrafluoro 811-97-2-sn 2744 sn 2745 flammable

Inventory name	Inventory name	On Inventory (yes/no)
Country or region		
Canada	Domestic Substances List(DSL)	Yes
Canada	Non-domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Act (TSCA) Inventory	yes

TSCA Status Listed.

SARA 313 Regulated Chemical(s)

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels

**SECTION 16 Other Information**

	HMIS
Health	1
Flammability	0
Reactivity/Physical hazard	1
PPE	Personal Protection rating to be supplied by user depending on use conditions.

**Abbreviations**

CAS Chemical Abstract Services  
NIOSH National Institute of occupational Safety and Health  
OSHA occupational Safety and health Administration  
TSCA Toxic Substances Control Act of 1976 USA  
PEL Permissible Exposure Limits  
TLV Threshold Limit value  
WHIMIS Workplace hazardous Materials Information System\

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.